HANDBOOK

•

VITRIFIED CLAY
SEWER PIPE

•

AND KINDRED CLAY PRODUCTS

W.P. ANGKKR

CLAY SEWER PIPE ASSOCIATION, INC.
PITTSBURGH, PENNSYLVANIA

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HANDBOOK
OF
VITRIFIED CLAY SEWER PIPE
AND
KINDRED CLAY PRODUCTS

◆

DIMENSIONS AND WEIGHTS

of Salt Glazed Vitrified Clay Sewer Pipe and Fittings, Fire Clay Flue Linings and Fittings, Stove Pipe and Fittings, Wall Coping and Fittings, and other Vitrified Clay Products

CLAY SEWER PIPE ASSOCIATION, Inc.
Pittsburgh, Pa.

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Foreword

The Clay Sewer Pipe Association, Incorporated, in publishing this Handbook, makes available to engineer, architect, contractor, purchasing agent, and distributors, complete information covering use, purchase, and shipment of vitrified clay sewer pipe and kindred vitrified clay products. Such information was previously supplied in a similar booklet entitled "Standards", now out of print.

Data included in this publication have been completely revised and brought up to date. Now listed are products which have been introduced since the last previous publication of "Standards" in 1928.

Items stocked by manufacturers generally conform to the dimension schedules contained herein. Listings include only so-called Standard products, although there are also stocked a number of types and sizes of special items for which there is repeated demand, but which are not standardized in construction practice. Information concerning such items can be obtained upon inquiry to manufacturers. Besides stocking Standard Pipe and Fittings, the vitrified clay sewer pipe industry is prepared to produce especially designed articles to meet requirements peculiar to individual installations. Weights, prices, and similar information concerning such items can be obtained on submission of a sketch or blue print.

Articles described herein conform to current standard specifications of the American Society for Testing Materials when so designated. In addition, there are included data referring to pipe outside the range of A.S.T.M. standards, manufactured to conform to specifications of state highway departments and other organizations having recurring use for vitrified clay products.

The Clay Sewer Pipe Association is an agency supported by the vitrified clay pipe industry to act as a central body for the dissemination of information concerning its products. Should there be any inquiry which cannot be answered within the limited scope of this booklet, communication with the Association's headquarters will bring forth an immediate reply.

A. S. T. M. Specifications

The American Society for Testing Materials (A.S.T.M.) publishes standard specifications for vitrified clay sewer pipe. These standards are revised from time to time, as the quality of vitrified clay pipe is improved. A.S.T.M. specifications are intended to furnish a criterion or standard which the purchaser of vitrified clay sewer pipe may apply to determine the acceptability of materials purchased.

Vitrified clay sewer pipe and allied products as herein described, exceed all of the requirements of A.S.T.M. specifications. The clay pipe industry is constantly engaged in a program of research and improvement, the results of which are reflected by successive refinements of A.S.T.M. specifications. Purchasers of clay pipe are naturally at liberty to order materials conforming to any other specifications or to meet particular requirements of the work for which pipe is ordered. The Clay Sewer Pipe Association will cooperate with purchasers of pipe in considering modification of standard requirements in connection with pipe materials for special cases.

Among the current improvements not included in the standards of the American Society for Testing Materials at the date of this publication are Extra Strength Salt Glazed Vitrified Sewer Pipe, designed to serve where pipe is subjected to exceptionally intense load. Other recent improvements include standardization of Y-branches at 60 degrees, standardization of curves and elbows to 30, 45, and 90 degrees, and standardization of pipe lengths in the "Double Strength" classifications.

All of the items described in this handbook are normally carried in manufacturers' stocks. Tabulated weights are approximate, but applicable to computation of minimum carload shipments.

Inquiries and suggestions are cordially invited.

THE CLAY SEWER PIPE ASSOCIATION, INC.
Pittsburgh, Pa.

Salt Glazed Vitrified Clay DOUBLE STRENGTH SEWER PIPE

Illustrated on opposite page

Conforming to A. S. T. M. Standards

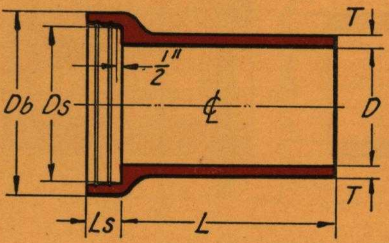
DIMENSION SCHEDULE

Inside Diameter of Barrel (inches)	Approximate Minimum Shipping Wt. (per foot)	Laying Length (feet)	Inside Diameter ½″ above Base of Socket (inches)	Depth of Socket (inches)	Thickness of Barrel (inches)	Maximum Outside Diameter of Socket (inches)	Inside Diameter of Barrel (inches)
D	Lbs.	L	D_s	L_s	T	D_b	D
4″	9.5	1	5¾	1¾	½	6¹³⁄₁₆	4″
	8.0	2					
6″	16.0	1	8¼	2¼	⅝	9⅝	6″
	14.5	2					
	14.0	3					
8″	24.5	1	10½	2½	¾	12³⁄₁₆	8″
	23.0	2					
	22.0	3					
10″	33.5	1	12¾	2½	⅞	14¹¹⁄₁₆	10″
	31.5	3					
12″	45.5	1	15⅛	2¾	1	17¼	12″
	43.5	3					
15″	69.5	1	18¾	2¾	1¼	21¼	15″
	67.5	3					
18″	99.0	1	22¼	3	1½	25¼	18″
	96.0	3					
21″	140.0	1	25⅞	3¼	1¾	29⅜	21″
	137.0	3					
24″	176.0	1	29⅜	3⅜	2	33⁵⁄₁₆	24″
	171.5	3					
27″	230.0	1	33⅛	3½	2¼	37½	27″
	225.5	3					
30″	275.0	1	36⅝	3½	2½	41⅜	30″
	270.0	3					
36″	396.0	1	43¼	4	2¾	48⁹⁄₁₆	36″
	390.0	3					

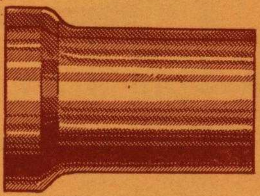
For applicable dimension tolerances, see A.S.T.M. Standards: Designation C-13, and subsequent revisions.

Salt Glazed Vitrified Clay
SINGLE STRENGTH
SEWER PIPE

Not Listed In A. S. T. M. Standards



Minimum Taper of Socket 1:20



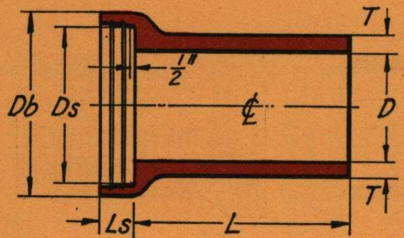
DIMENSION SCHEDULE

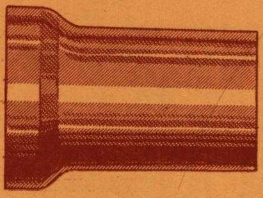
Inside Diameter of Barrel (inches)	Approximate Minimum Shipping Wt. (per foot)	Laying Length (feet)	Inside Diameter ½" above Base of Socket (inches)	Depth of Socket (inches)	Thickness of Barrel (inches)	Maximum Outside Diameter of Socket (inches)	Inside Diameter of Barrel (inches)
D	Lbs.	L	D_s	L_s	T	D_b	D
5"	12.5	1	7 1/16	2	⅝	8 7/16	5"
	11.0	2					
18"	85	1	21¾	3	1¼	24 7/16	18"
	82	3					
24"	144	1	28½	3¼	1⅝	31⅞	24"
	140	3					
27"	222	1	32½	3½	2	36½	27"
	216	3					
30"	256	1	35¾	3½	2⅛	40	30"
	250	3					
36"	368	1	42¾	4	2½	47 11/16	36"
	360	3					

For applicable dimension tolerances see A.S.T.M. Standards: Designation C-13, and subsequent revisions.

For sizes not listed, see "Double Strength Salt Glazed Vitrified Clay Sewer Pipe" page 4.

Salt Glazed Vitrified Clay
EXTRA STRENGTH SEWER PIPE





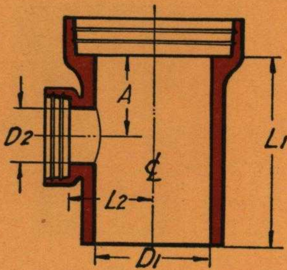
DIMENSION SCHEDULE

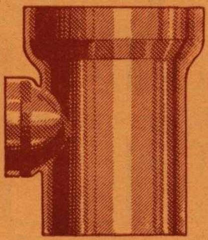
Inside Diameter of Barrel (inches)	Approximate Minimum Shipping Wt. (per foot)	Laying Length (feet)	Inside Diameter ½" above Base of Socket (inches)	Depth of Socket (inches)	Thickness of Barrel (inches)	Maximum Outside Diameter of Socket (inches)	Inside Diameter of Barrel (inches)
D	lbs.	L	D_s	L_s	T	D_b	D
6"	15.5	3	8⅜	2¼	11⁄16	10	6"
8"	24.0	3	10⅝	2½	13⁄16	12 9⁄16	8"
10"	36.5	3	13	2½	1	15 3⁄16	10"
12"	55.5	3	15⅝	2¾	1¼	18¼	12"
15"	89.5	3	19½	2¾	1⅝	22¾	15"
18"	116.0	3	23	3	1⅞	26 11⁄16	18"
21"	180.0	3	26⅞	3¼	2¼	31 3⁄16	21"
24"	218.0	3	30⅜	3⅜	2½	35⅛	24"
30"	344.0	3	37⅞	3½	3⅛	43⅝	30"
36"	505.0	3	44¾	4	3½	51 3⁄16	36"

NOTE: At the time of publication of this Handbook, the U. S. Federal Government Committee on Specifications for vitrified clay sewer pipe has under active consideration proposed revisions of the current Federal Specifications for clay sewer pipe No. SS-P-361. Included in the proposed revisions are full details for Extra Strength Vitrified Clay Sewer Pipe. In the event that the revised specifications show variations of dimensions of Extra Strength Clay Sewer Pipe from the dimensions tabulated above, a reprinting of this page will be forwarded to you for inclusion in this booklet. Should you fail to receive your copy at the proper time, it is requested that you communicate with the Clay Sewer Pipe Association offices, 947 Oliver Building, Pittsburgh, Pennsylvania.

Conforming to A. S. T. M. Standards

Salt Glazed Vitrified Clay
"T" BRANCHES
DOUBLE STRENGTH





For detail dimensions not shown, see page 4, "Double Strength Salt Glazed Vitrified Clay Sewer Pipe"

DIMENSION SCHEDULE

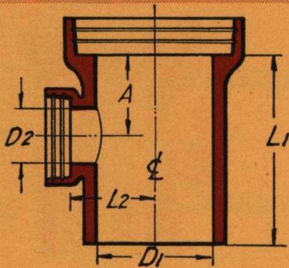
Inside Diameter of Main Barrel (inches) D₁	Inside Diameter of Branch (inches) D₂	Laying Length of Main Barrel (feet) L₁	Approximate Minimum Shipping Wt. (per piece) (lbs.)	Laying Length of Branch (inches) L₂	Location of Branch (inches) A
4″	4″	2	19.0	4¼	5
6″	4″	2	33.0	5½	5¼
	6″	2	35.0	5½	6¼
8″	4″	2	50.0	6½	5½
		3	70.0	6½	5½
	6″	2	52.0	6⅝	6½
		3	72.0	6⅝	6½
	8″	2	58.0	7	7¾
		3	78.0	7	7¾
10″	6″	3	98.5	7¾	6¾
	8″	3	103.5	8¼	7¾
	10″	3	110.5	8½	9
12″	6″	3	138.5	9	6¾
	8″	3	139.5	9½	8
	10″	3	145.5	9¾	9¼
	12″	3	147.5	10	10½

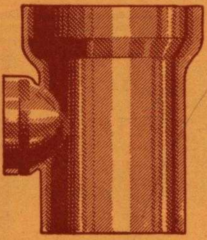
For applicable dimension tolerances see A. S. T. M. Standards: Designation C-13, and subsequent revisions.

For branch sizes not shown, it is recommended that "Increasers" be used with standard fittings of branch fitting diameter next larger than the diameter of the branch line to be connected.

Salt Glazed Vitrified Clay
"T" BRANCHES
DOUBLE STRENGTH

Conforming to A. S. T. M. Standards





For detail dimensions not shown, see page 4,
"Double Strength Salt Glazed Vitrified Clay Sewer Pipe"

DIMENSION SCHEDULE

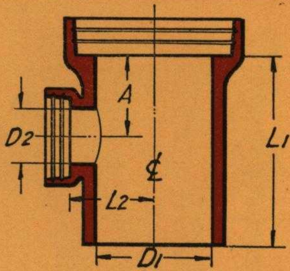
Inside Diameter of Main Barrel (inches)	Inside Diameter of Branch (inches)	Laying Length of Main Barrel (feet)	Approximate Minimum Shipping Wt. (per piece)	Laying Length of Branch (inches)	Location of Branch (inches)
D1	D2	L1	(lbs.)	L2	A
15″	6″	3	210.5	10¾	7
	8″	3	211.5	11¼	8¼
	12″	3	222.5	11½	10½
	15″	3	238.0	11¾	12¼
18″	6″	3	296.0	12½	7¼
	8″	3	297.0	13	8¼
	12″	3	304.0	13¼	10½
	18″	3	343.0	13½	13¾
21″	6″	3	447.0	14¼	7½
	8″	3	449.0	14¾	8¾
	12″	3	453.0	15	11
	18″	3	470.0	15¼	14¼
	21″	3	500.0	15½	16
24″	6″	3	519.5	16	8
	8″	3	520.5	16½	9
	12″	3	530.5	16¾	11¼
	18″	3	564.5	17¼	14½
	24″	3½	590.0	17¾	18

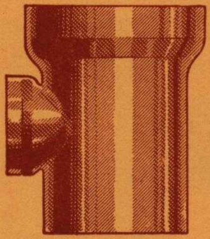
For applicable dimension tolerances see A. S. T. M. Standards: Designation C-13, and subsequent revisions.

For branch sizes not shown, it is recommended that "Increasers" be used with standard fittings of branch fitting diameter next larger than the diameter of the branch line to be connected.

Salt Glazed Vitrified Clay
"T" BRANCHES
DOUBLE STRENGTH

Conforming to A. S. T. M. Standards





For dimensions not shown see pages 4 and 5.
"Double Strength Salt Glazed Vitrified Clay Sewer Pipe"

DIMENSION SCHEDULE

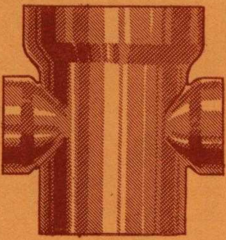
Inside Diameter of Main Barrel (inches)	Inside Diameter of Branch (inches)	Laying Length of Main Barrel (feet)	Approximate Minimum Shipping Wt. (per piece)	Laying Length of Branch (inches)	Location of Branch (inches)
D_1	D_2	L_1	(lbs.)	L_2	A
27″	6″	3	680	17¾	8¼
	12″	3	688	18½	11½
	18″	3	715	18¾	15
	24″	3½	800	19	18½
30″	6″	3	817.0	19½	8½
	12″	3	825.0	20¼	12
	18″	3	850.0	21	15½
	24″	3½	905.0	21¼	19
36″	6″	3	1140.0	22¾	9¼
	12″	3	1180.0	23½	12½
	18″	3	1210.0	24½	16
	24″	3½	1240.0	25	19¾
Not listed in A. S. T. M. Standards					
5″	4″	2	24.0	4¾	5
	5″	2	25.0	5	5¾

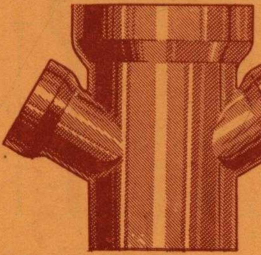
For applicable dimension tolerances see A. S. T. M. Standards: Designation C-13, and subsequent revisions.

For branch sizes not shown, it is recommended that "Increasers" be used with standard fittings of branch fitting diameter next larger than the diameter of the branch line to be connected.

Salt Glazed Vitrified Clay
DOUBLE "T" Branches
DOUBLE STRENGTH
Conforming to A. S. T. M. Standards

Salt Glazed Vitrified Clay
DOUBLE "Y" Branches
DOUBLE STRENGTH
Conforming to A. S. T. M. Standards





For detail dimensions not shown, see pages 4, 5, 7, 9, 11 and 13.

DIMENSION SCHEDULE

Inside Diameter of Main Barrel (inches)	Inside Diameter of Branch (inches)	Laying Length (feet)	Approximate Shipping Weights: (pounds per piece)	
D_1	D_2	L	T's	Y's
4″	4″	2	22	24
6″	4″	2	37	39
	6″	2	41	47
8″	4″	2	54	56
	6″	2	58	66
	8″	2	70	78
10″	6″	3	102.5	108.5
	8″	3	112.5	122.5
12″	6″	3	146.5	148.5
	8″	3	148.5	162.5

(Not listed in A. S. T. M. Standards)

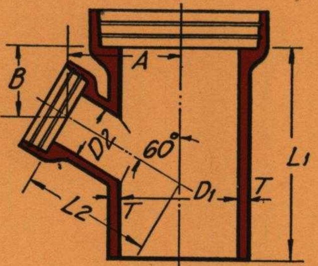
D_1	D_2	L	T's	Y's
5″	4″	2	26	29
	5″	2	28	32

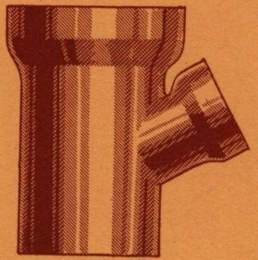
For applicable dimension tolerances, see A. S. T. M. Standards: Designation C-13, and subsequent revisions.

For branch sizes not shown, it is recommended that "increasers" be used with standard fittings of branch fitting diameter next larger than the diameter of the branch line to be connected.

Conforming to A. S. T. M. Standards

Salt Glazed Vitrified Clay
"Y" BRANCHES
DOUBLE STRENGTH





For dimensions not shown see page 4,
"Double Strength Salt Glazed Vitrified Clay Sewer Pipe"

DIMENSION SCHEDULE

Inside Diameter of Main Barrel (inches)	Inside Diameter of Branch (inches)	Laying Length of Main Barrel (feet)	Approximate Minimum Shipping Wt. (per piece)	Laying Length of Branch (inches)	Center Line Projection of Branch (inches)	Offset Projection of Branch (inches)
D_1	D_2	L_1	(lbs.)	L_2	A	B
4″	4″	2	20.0	6¾	5¾	3½
6″	4″	2	34.0	7½	6½	3¾
	6″	2	38.0	8¾	7½	4½
8″	4″	2	51.0	8¾	7½	4
		3	71.0			
	6″	2	56.0	9¾	8½	4¾
		3	76.0			
	8″	2	62.0	11	9½	5¾
		3	82.0			
10″	6″	3	101.5	11¼	9¾	5
	8″	3	108.5	12	10½	5¾
	10″	3	116.5	13	11¼	6½
12″	6″	3	139.5	12¾	11	4¾
	8″	3	146.5	13½	11¾	5¾
	10″	3	153.5	14¼	12¼	6½
	12″	3	163.5	15	13	7¾

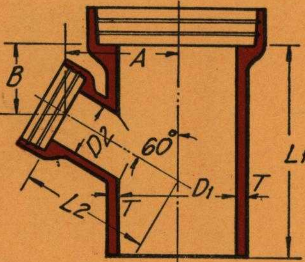
For applicable dimension tolerances see A. S. T. M. Standards: Designation C-13, and subsequent revisions.

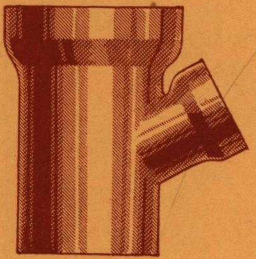
For branch sizes not shown, it is recommended that "Increasers" be used with standard fittings of branch fitting diameter next larger than the diameter of the branch line to be connected.

Salt Glazed Vitrified Clay

"Y" BRANCHES DOUBLE STRENGTH

Conforming to A. S. T. M. Standards





For dimensions not shown see page 4,
"Double Strength Salt Glazed Vitrified Clay Sewer Pipe"

DIMENSION SCHEDULE

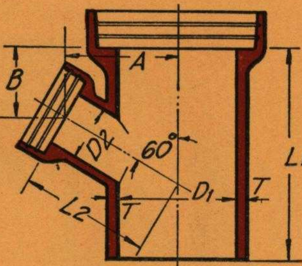
Inside Diameter of Main Barrel (inches) D₁	Inside Diameter of Branch (inches) D₂	Laying Length of Main Barrel (feet) L₁	Approximate Minimum Shipping Wt. (per piece) (lbs.)	Laying Length of Branch (inches) L₂	Center Line Projection of Branch (inches) A	Offset Projection of Branch (inches) B
15″	6″	3	212.5	14¼	12½	5
	8″	3	218.5	15¼	13¼	6¼
	12″	3	227.5	16½	14¼	8¼
	15″	3	240.0	17¾	15½	9½
18″	6″	3	298.0	16½	14¼	5
	8″	3	299.0	17¼	15	6½
	12″	3	324.0	18¾	16¼	8
	18″	3	413.0	21	18¼	11
21″	6″	3	450.0	18¼	15¾	5½
	8″	3	454.0	19½	17	6½
	12″	3	464.0	20¾	18	8¼
	18″	3	522.0	23	20	11¼
	21″	3	525.0	24¼	21	12¼
24″	6″	3	550.0	20¼	17½	5¾
	8″	3	555.0	21½	18½	6½
	12″	3	560.0	22¾	19¾	8¾
	18″	3	595.0	25	21¾	11½
	24″	3½	620.0	27¼	23½	14½

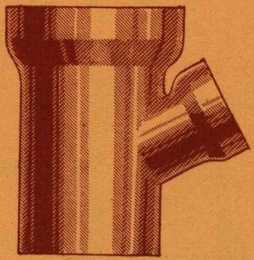
For applicable dimension tolerances see A. S. T. M. Standards: Designation C-13, and subsequent revisions.

For branch sizes not shown, it is recommended that "Increasers" be used with standard fittings of branch fitting diameter next larger than the diameter of the branch line to be connected.

Conforming to A. S. T. M. Standards

Salt Glazed Vitrified Clay
"Y" BRANCHES
DOUBLE STRENGTH





For dimensions not shown see pages 4 and 5,
"Double Strength Salt Glazed Vitrified Clay Sewer Pipe"

DIMENSION SCHEDULE

Inside Diameter of Main Barrel (inches) D_1	Inside Diameter of Branch (inches) D_2	Laying Length of Main Barrel (feet) L_1	Approximate Minimum Shipping Wt. (per piece) (lbs.)	Laying Length of Branch (inches) L_2	Center Line Projection of Branch (inches) A	Offset Projection of Branch (inches) B
27″	6″	3	652	22½	19½	6
	12″	3	680	24½	21¼	9
	18″	3	695	26¾	23¼	11¾
	24″	4	785	29	25	14¾
30″	6″	3	817	24	20¾	6¼
	12″	3	860	26½	23	9¼
	18″	3	856	28¾	25	12
	24″	4	1150	31¼	27	15
36″	6″	3	1135	28¾	25	5¾
	12″	3	1142	30½	26½	9¼
	18″	3	1205	33¼	28¾	12½
	24″	4	1505	35¼	30½	15¾
(not listed in A. S. T. M. Standards)						
5″	4″	2	26	7¼	6¼	3¼
	5″	2	28	7½	6½	4

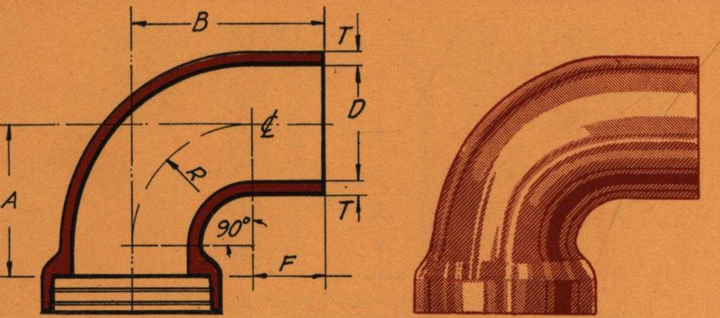
For applicable dimension tolerances see A. S. T. M. Standards: Designation C-13, and subsequent revisions.

For branch sizes not shown, it is recommended that "Increasers" be used with standard fittings of branch fitting diameter next larger than the diameter of the branch line to be connected.

Salt Glazed Vitrified Clay

90°—MOULDED OR PRESSED ELBOWS DOUBLE STRENGTH

Conforming to A. S. T. M. Standards



Moulded Elbow Illustrated

DIMENSION SCHEDULE

Inside Diameter of Barrel (inches)	Approx. Minimum Shipping Weight (per piece)	Center Line Projection (inches)	Offset Projection (inches)	Radius of Center Line (inches)	Spigot Length (inches)	Inside Diameter of Barrel (inches)
D	(lbs.)	A	B	R	F	D
			SHORT ELBOWS			
4″	8	5	6	4	2	4″
*5″	12	6	7⅛	4⅝	2½	*5″
6″	16	6½	7⅝	5⅛	2½	6″
8″	27	7⅞	9	6¼	2¾	8″
10″	40	9	10⅛	7⅜	2¾	10″
12″	60	10½	11½	8½	3	12″
			MEDIUM LENGTH ELBOWS			
4″	14	7½	8	6	2	4″
*5″	20	9	10	7½	2½	*5″
6″	24	10½	11½	9	2½	6″
8″	36	13½	14¾	12	2¾	8″
10″	45	16½	17¾	15	2¾	10″
12″	85	19½	21	18	3	12″
			LONG ELBOWS			
4″	17	9½	10	8	2	4″
*5″	23	11½	12½	10	2½	*5″
6″	29	13½	14½	12	2½	6″
8″	45	17½	18¾	16	2¾	8″
10″	72	21½	22¾	20	2¾	10″
12″	113	25½	27	24	3	12″

* Not included in A. S. T. M. Standards.

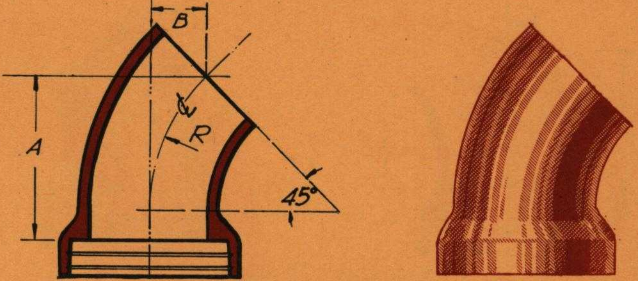
For applicable dimension tolerances see A. S. T. M. Standards: Designation C-13, and subsequent revisions.

Salt Glazed Vitrified Clay

MOULDED OR PRESSED CURVES—45°

Conforming to A. S. T. M. Standards

DOUBLE STRENGTH



Pressed Curve Illustrated

DIMENSION SCHEDULE

Inside Diameter of Barrel (inches)	Approx. Minimum Shipping Weight (per piece)	Center Line Projection (inches)	Offset Projection (inches)	Radius of Center Line (inches)	Inside Diameter of Barrel (inches)
D	(lbs.)	A	B	R	D
SHORT CURVES					
4"	10	11¼	3	10¼	4"
*5"	13	11¼	3	10¼	*5"
6"	16	11¼	3	10¼	6"
8"	25	11¼	3	10¼	8"
10"	32	11¼	3	10¼	10"
12"	45	11¼	3	10¼	12"
MEDIUM LENGTH CURVES					
4"	15	16⅝	5¼	17⅞	4"
*5"	18	16⅝	5¼	17⅞	*5"
6"	23	16⅝	5¼	17⅞	6"
8"	36	16⅝	5¼	17⅞	8"
10"	48	16⅝	5¼	17⅞	10"
12"	67	16⅝	5¼	17⅞	12"
LONG CURVES					
4"	16	22	7½	25½	4"
*5"	20	22	7½	25½	*5"
6"	29	22	7½	25½	6"
8"	46	22	7½	25½	8"
10"	64	22	7½	25½	10"
12"	97	22	7½	25½	12"

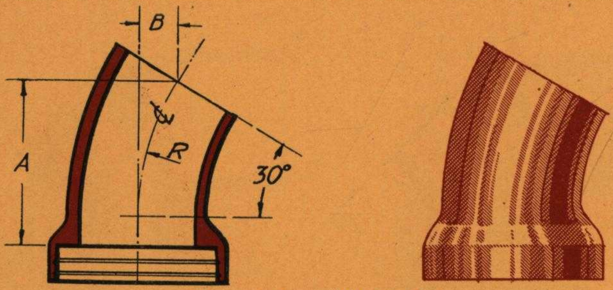
* Not included in A. S. T. M. Standards.

For applicable dimension tolerances see A. S. T. M. Standards: Designation C-13, and subsequent revisions.

Salt Glazed Vitrified Clay

30°—MOULDED OR PRESSED CURVES
DOUBLE STRENGTH

Conforming to A. S. T. M. Standards



Pressed Curve Illustrated

DIMENSION SCHEDULE

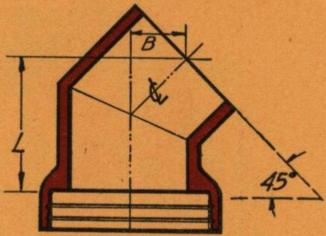
Inside Diameter of Barrel (inches)	Approximate Minimum Shipping Wt. (per piece)	Center Line Projection (inches)	Offset Projection (inches)	Radius of Center Line (inches)	Inside Diameter of Barrel (inches)
		SHORT CURVES			
D	(lbs.)	A	B	R	D
4″	10	11⅝	2	15¼	4″
*5″	11	11⅝	2	15¼	*5″
6″	17	11⅝	2	15¼	6″
8″	25	11⅝	2	15¼	8″
10″	34	11⅝	2	15¼	10″
12″	46	11⅝	2	15¼	12″
		MEDIUM LENGTH CURVES			
D	(lbs.)	A	B	R	D
4″	14	17⅜	3½	26¾	4″
*5″	17	17⅜	3½	26¾	*5″
6″	24	17⅜	3½	26¾	6″
8″	36	17⅜	3½	26¾	8″
10″	50	17⅜	3½	26¾	10″
12″	70	17⅜	3½	26¾	12″

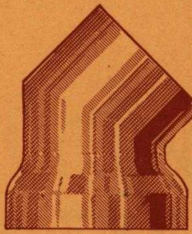
* Not included in A. S. T. M. Standards.

For applicable dimension tolerances see A. S. T. M. Standards: Designation C-13, and subsequent revisions.

Salt Glazed Vitrified Clay
CUT CURVES—45°
DOUBLE STRENGTH

Conforming to A. S. T. M. Standards





DIMENSION SCHEDULE

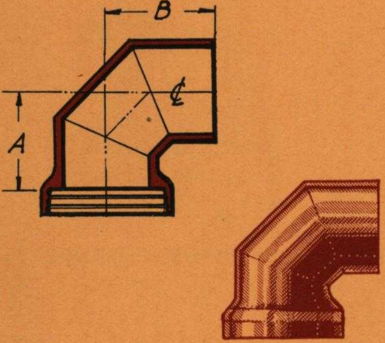
Inside Diameter of Barrel (inches)	Approximate Minimum Shipping Wt. (per piece)	Center Line Projection (inches)	Offset Projection (inches)	Inside Diameter of Barrel (inches)
D	(lbs.)	A	B	D
8″	26	8³⁄₁₆	3½	8″
10″	35	9	3⅞	10″
12″	65	9¹⁵⁄₁₆	4⁵⁄₁₆	12″
15″	90	11½	4⅞	15″
18″	140	12¹⁵⁄₁₆	5⁹⁄₁₆	18″
21″	230	15	6⁷⁄₁₆	21″
24″	340	16⅝	7⁵⁄₁₆	24″
27″	575	18¼	7¾	27″
30″	660	19⁹⁄₁₆	8⁵⁄₁₆	30″
36″	916	23½	9¹⁵⁄₁₆	36″

For applicable dimension tolerances see A. S. T. M. Standards: Designation C-13, and subsequent revisions.

Salt Glazed Vitrified Clay

90°—CUT ELBOWS DOUBLE STRENGTH

Conforming to A. S. T. M. Standards



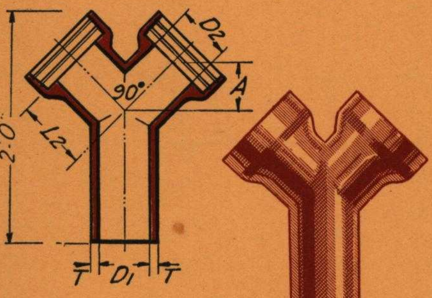
DIMENSION SCHEDULE

Inside Diameter of Barrel (inches) D	Approximate Minimum Shipping Wt. (per piece) (lbs.)	Center Line Projection (inches) A	Offset Projection (inches) B
8″	37	7⅞	8¼
10″	51	8⅞	9⅜
12″	78	10⅜	10¾
15″	140	12½	13½

Salt Glazed Vitrified Clay

"V" BRANCHES DOUBLE STRENGTH

Conforming to A. S. T. M. Standards



DIMENSION SCHEDULE

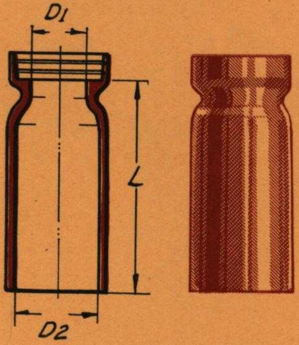
Barrel Diameter (inches) D_1	Branch Diameter (inches) D_2	Approximate Minimum Shipping Wt. (per piece) (lbs.)	Laying Length of Branch (inches) L_2	Offset Projection of Branch (inches) A
4″	4″	21	5	3½
6″	4″	34	5	3½
6″	6″	37	6¼	4¼
8″	8″	54	7½	5⅜

For applicable dimension tolerances see A. S. T. M. Standards: Designation C-13, and subsequent revisions.

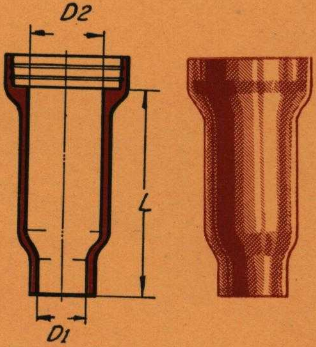
Salt Glazed Vitrified Clay
INCREASERS AND REDUCERS

Conforming to A. S. T. M. Standards

INCREASERS



REDUCERS



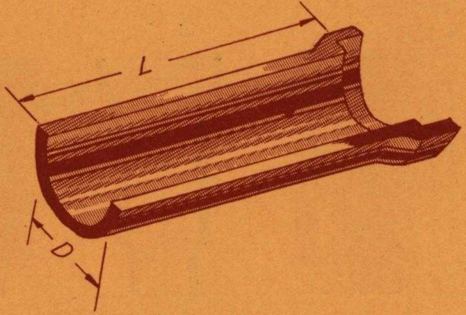
DIMENSION SCHEDULE

INCREASERS				REDUCERS			
Small Diameter (inches) D_1	Large Diameter (inches) D_2	Laying Length (feet) L	Approximate Minimum Shipping Weight (per piece) (lbs.)	Small Diameter (inches) D_1	Large Diameter (inches) D_2	Laying Length (feet) L	Approximate Minimum Shipping Weight (per piece) (lbs.)
4″	6″	1	16	4″	6″	1	18
4″	8″	1	26	4″	8″	1	29
6″	8″	1	27	6″	8″	1	31
6″	10″	1	37	6″	10″	1	41
8″	10″	1	40	8″	10″	1	43
8″	12″	1	55	8″	12″	1	59
10″	12″	1	65	10″	12″	1	69
10″	15″	1	95	10″	15″	1	100
12″	15″	1	115	12″	15″	1	120
12″	18″	2	140	12″	18″	2	145
15″	18″	2	150	15″	18″	2	155
15″	21″	2	245	15″	21″	2	255
18″	21″	2	250	18″	21″	2	260
18″	24″	2	310	18″	24″	2	320
21″	24″	2	315	21″	24″	2	325

Note: Increasers have sockets on small ends: Reducers have sockets on large ends.

CHANNEL PIPE

Conforming to A. S. T. M. Standards



For dimensions not shown see pages 3, 4 and 5.

WEIGHT SCHEDULE

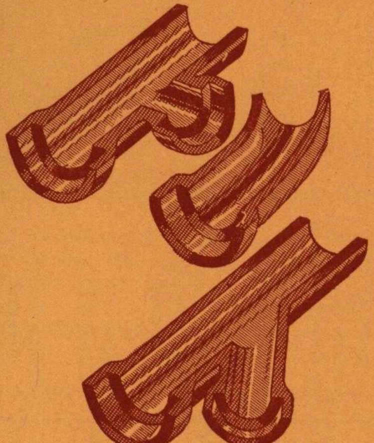
Inside Diameter (inches)	Single Strength Channel Pipe		Double Strength Channel Pipe	
	Laying Length (feet)	Approximate Minimum Shipping Wt. (per foot)	Laying Length (feet)	Approximate Minimum Shipping Wt. (per foot)
D	L	(lbs.)	L	(lbs.)
4″	x	x	2	4
6″	x	x	2	8
8″	x	x	2	11.5
10″	x	x	3	16
12″	x	x	3	22
15″	x	x	3	34
18″	3	41	3	48
21″	3	53	3	69
24″	3	70	3	86
27″	3	108	3	113
30″	3	125	3	135
36″	3	180	3	195

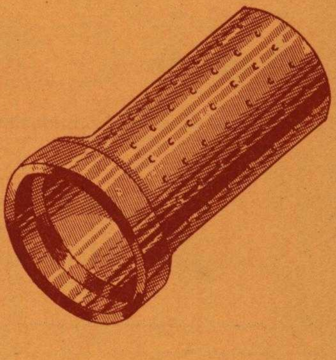
For applicable dimension tolerances see A. S. T. M. Standards: Designation C-13, and subsequent revisions.

Salt Glazed Vitrified Clay
CHANNEL FITTINGS
DOUBLE STRENGTH

Salt Glazed Vitrified Clay
PERFORATED PIPE
DOUBLE STRENGTH

Conforming to A. S. T. M. Standards





For detail dimensions see pages 4, 7, 11, 14 and 15

WEIGHT SCHEDULE

Inside Diameter of Main Barrel (inches)	Inside Diameter of Branch (inches)	Approximate Minimum Shipping Wt. (per piece)
CHANNEL "T" BRANCHES		
D₁	D₂	(lbs.)
4″	4″	10
6″	6″	18
CURVES AND ELBOWS		
	Short	Medium
D	(lbs.)	(lbs.)
4″	5	7
6″	7	8
CHANNEL "Y" BRANCHES		
D₁	D₂	(lbs.)
4″	4″	10
6″	6″	18

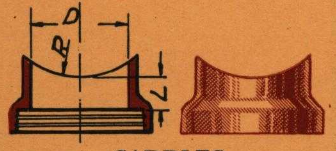
Inside Diameter of Barrel (inches)	Diameter of Holes (inches)	Number of Holes
4″	½	28
6″	½	42
8″	½	56
10″	½	70
12″	½	84

For dimensions not shown, and minimum shipping weights, see page 4.

Perforated drainage pipe stocked in two-foot laying lengths only.

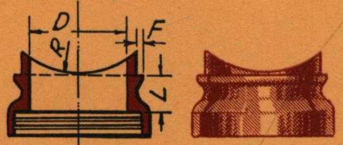
SALT GLAZED VITRIFIED CLAY SADDLES AND SLANTS

Conforming to A. S. T. M. Standards



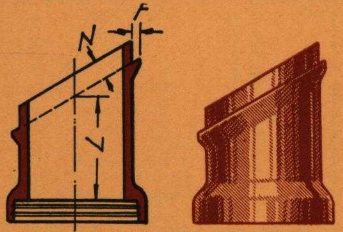
SADDLES

Inside Diameter of Barrel (inches) D	Laying Length (inches) L	Approximate Minimum Shipping Wt. (per piece) (lbs.)	Radius (inches) R
4″	1¾	5	2¾
*5″	1¾	6	3¼
6″	1¾	7	3¾
8″	2½	10	5



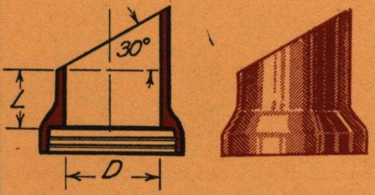
SADDLE HUB TEES

Inside Diameter of Barrel (inches) D	Laying Length (inches) L	Approximate Minimum Shipping Wt. (per piece) (lbs.)	Radius (inches) R	Flange Width (inches) F
4″	6	7	2¾	1
*5″	6	11	3¼	1
6″	6	13	3¾	1
8″	6	15	5	1



SADDLE HUB SLANTS

Inside Diameter of Barrel (inches) D	Laying Length (inches) L	Approximate Minimum Shipping Wt. (per piece) (lbs.)	Nipple Length (inches) N	Flange Width (inches) F
4″	10	8	2½	1
6″	10	14	2½	1
8″	9	24	2½	1



SLANTS

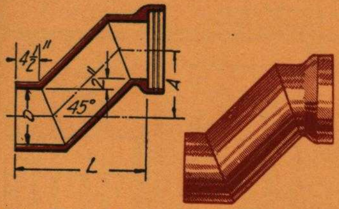
Inside Diameter (inches) D	Laying Length (inches) L	Approximate Minimum Shipping Wt. (per piece) (lbs.)
4″	4½	11
6″	4½	18
8″	9	27
10″	9	38
12″	9	57

* Not included in A. S. T. M. Standards.

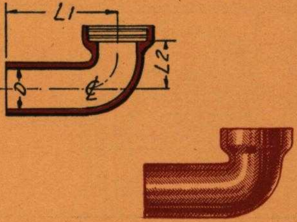
Salt Glazed Vitrified Clay
HALF TRAPS
DOUBLE STRENGTH

Salt Glazed Vitrified Clay
FOUNDATION ELBOWS
DOUBLE STRENGTH

Conforming to A. S. T. M. Standards



For dimensions not shown see page 4 "Double Strength Salt Glazed Vitrified Sewer Pipe."

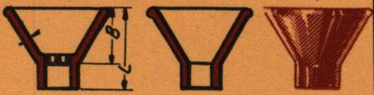


DIMENSION SCHEDULE

Inside Dia. of Barrel (inches) D	Laying Length (inches) L	Approx. Min. Shipping Wt. (per piece) (lbs.)	Offset Distance (inches) A
8"	21	50	10
10"	24⅛	65	12
12"	27¼	100	14

Inside Dia. of Barrel (inches) D	Center Line Projection (inches) L_1	Approx. Min. Shipping Wt. (per piece) (lbs.)	Offset Projection (inches) L_2
4"	25	28	5
6"	18	16	7

SALT GLAZED VITRIFIED CLAY SLOP BOWLS
(With or Without Strainers)



SALT GLAZED VITRIFIED CLAY STOPPERS AND STRAINERS

STOPPER

STRAINER

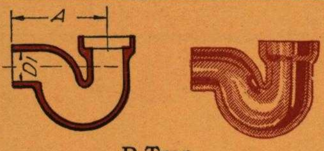
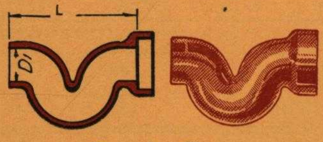
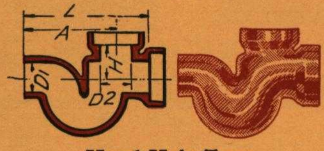
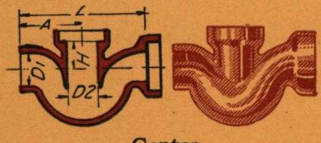
DIMENSION SCHEDULE

Mouth Dia. (inches) A	Outlet Dia. (inches) D	Overall Length (inches) L	Length of Slant (inches) B	Thickness (inches) T
12"	4"	11½	8½	1⅛
	6"	12	8½	1⅛
15"	4"	12	8½	1⅜
	6"	13	9	1⅜

For Pipe Diameter (inches)	Approx. Outside Dia. (inches)
4"	5⅛
5"	6¼
6"	7¼
8"	9½
10"	11¾
12"	14

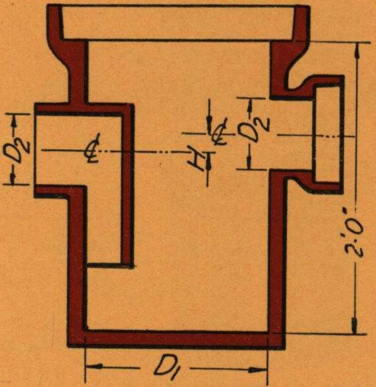
Salt Glazed Vitrified Clay
TRAPS

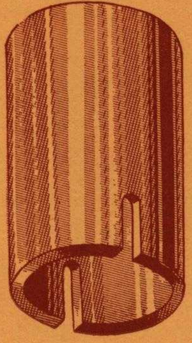
DIMENSION SCHEDULE

FOR SPECIAL TRAPS SEE MANUFACTURERS' CATALOGUE	Inside Diameter (inches)	Handhole Diameter (inches)	Laying Length (inches)	Center Line to End (inches)	Depth of Seal (inches)	Elevation of Socket (inches)	Approximate Minimum Shipping Wt. (per piece)
	D_1	D_2	L	A	S	H	(lbs.)
 P Trap	4″	x	x	11½	2	x	16
	5″	x	x	13⅞	2¼	x	24
	6″	x	x	15⅜	2¼	x	35
	8″	x	x	18¾	2½	x	63
 Running Trap	4″	x	16	x	2	x	16
	5″	x	19½	x	2¼	x	25
	6″	x	21½	x	2¼	x	35
	8″	x	26	x	2½	x	60
 Hand Hole Trap	4″	4″	16	11	2	4¼	20
	5″	4″	19½	14½	2¼	4⅞	29
		5″	19½	14½	2¼	4⅞	30
	6″	4″	21½	16¼	2¼	5⅜	35
		5″	21½	16	2¼	5⅜	37
		6″	21½	15¼	2¼	5½	38
	8″	5″	26	20¼	2½	6⅝	68
		6″	26	19½	2½	6⅝	70
 Center Hand Hole Trap	4″	4″	16	8	2	2	25
	5″	4″	19½	9¾	2¼	2½	32
		5″	19½	9¾	2¼	2½	34
	6″	4″	21½	10¾	2¼	3	41
		5″	21½	10¾	2¼	3	45
	8″	6″	26	13	2½	3½	70

Salt Glazed Vitrified Clay
GREASE TRAPS

Salt Glazed Vitrified Clay
METER BOXES





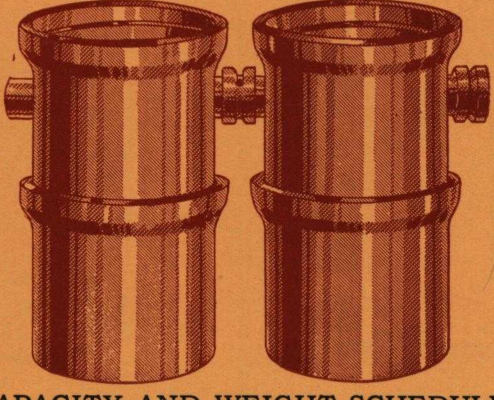
DIMENSION SCHEDULE

Inside Diameter of Main Barrel (in.) D_1	Inside Diameter of Branch Barrels (inches) D_2	Approximate Minimum Shipping Wt. (per piece) (lbs.)	Height of Inlet Above Outlet (in.) H
12"	4"	110	1½
	6"	120	1½
15"	4"	172	1½
	6"	184	1½
18"	4"	228	1½
	6"	240	1½

Inside Diameter (inches) D	Laying Length (feet) L	Approximate Minimum Shipping Wt. (per piece) (lbs.)	Thickness (Inches) T
15"	2	152.6	1⅛
	2½	191.0	1⅛
	3	229.4	1⅛
18"	2	154.5	1¼
	2½	194.0	1¼
	3	233.5	1¼
24"	2	280.0	1⅝
	2½	350.0	1⅝
	3	420.0	1⅝

Salt Glazed Vitrified Clay
SEPTIC TANKS

including connection between units

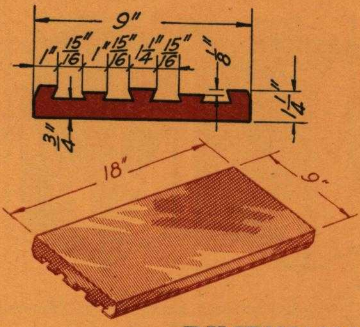


CAPACITY AND WEIGHT SCHEDULE

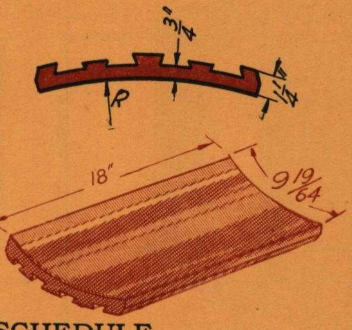
Inside Dia. (inches)	Inside Depth (feet)	Net Capacity (gallons)	Number of Persons	Approximate Shipping Weight (lbs.)
SINGLE UNIT TANKS				
24	4	75	3	600
	5	100	4	720
	6	125	5	870
30	4	120	5	1115
	5	155	6	1345
	6	190	8	1590
DOUBLE UNIT TANKS				
24	4	150	6	1200
	5	200	8	1440
	6	250	10	1740
30	4	240	10	2240
	5	310	13	2690
	6	380	15	3180
TRIPLE UNIT TANKS				
24	4	225	9	1800
	5	300	12	2160
	6	375	15	2610
30	4	360	14	3345
	5	465	18	4035
	6	570	23	4770

SALT GLAZED VITRIFIED CLAY LINER PLATES

FLAT



CURVED



DIMENSION SCHEDULE

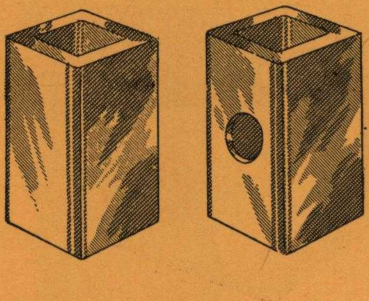
Inside Diameter of Sewer (inches) D	Plate Identification Letter	Approximate Minimum Shipping Wt. (per ft. of sewer) (lbs.)	Number of Plates to Circle No.	Radius (inches) R
30"	C	100	10	16½
33"	C	110	11	16½
36"	C	120	12	16½
39"	D	130	13	21
42"	D	140	14	21
45"	D	150	15	21
48"	E	160	16	26¼
51"	E	170	17	26¼
54"	E	180	18	26¼
57"	E	190	19	26¼
60"	J	200	20	33
63"	J	210	21	33
66"	J	220	22	33
69"	J	230	23	33
72"	J	240	24	33
78"	P	260	26	45
84"	P	280	28	45
90"	P	300	30	45
96"	P	320	32	45
102"	P	340	34	45

Note—The standard length of both flat and curved plates is 18 inches. Shorter lengths of 6, 9, and 12 inches are also provided for breaking joints, making closures and laying around curves.

VITRIFIED CLAY FLUE LININGS

Glazed and Unglazed

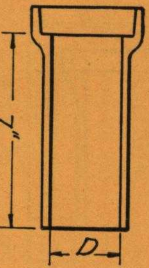
ROUND

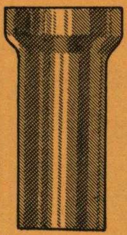


RECTANGULAR

DIMENSION SCHEDULE

Inside Diameter (inches)	Length (feet)	Approximate Minimum Shipping Wt. (per foot)	Thickness (inches)	Outside Width of Short Side (inches)	Outside Width of Long Side (inches)	Length (feet)	Wall Thickness (inches)	Approximate Minimum Shipping Wt. (per foot)	Diameter of Stove Pipe to Fit Opening (inches)
D	L	(lbs.)	T	W_1	W_2	L	T	(lbs.)	D
6″	2	11	⅝	4½″	8½″	2	⅝	11	6
8″	2	17	¾		13″	2	⅝	18	6, 7, 8
10″	3	27	⅞	8½″	8½″	2	⅝	18	6
12″	3	37	1		13″	2	¾	27	6, 7, 8
15″	3	52	1⅛		18″	2	⅞	36	6, 7, 8
18″	3	67	1¼	13″	13″	2	⅞	35	6, 7, 8
21″	3	90	1⅝		18″	2	⅞	45	6, 7, 8
24″	2	120	1¾	18″	18″	2	1⅛	70	6, 7, 8
27″	2	186	2	20″	20″	2	1⅜	103	6, 7, 8
30″	2	218	2⅛		24″	2	1½	115	6, 7, 8
36″	2	330	2½	24″	24″	2	1½	129	6, 7, 8





Note—All dimensions, except length. are the same for stove pipe as for Double strength sewer pipe (page 4) of the same inside diameter.

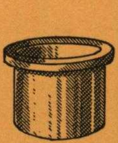
DIMENSION SCHEDULE

Inside Diameter (inches)	Length (feet)	Approximate Minimum Shipping Wt. (per foot)
D	L	(lbs.)
6″	2	13
7″	2	17
8″	2	20

VITRIFIED CLAY FLUE RINGS (THIMBLES)

Unglazed

With and Without Flanges

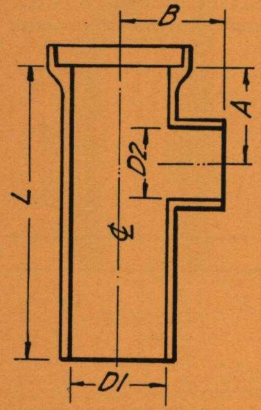


DIMENSION SCHEDULE

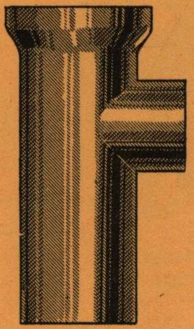
Inside Diameter (inches)	Length (inches)	Thickness (inches)
D	L	T
4″	4½, 6, 9 & 12	½
5″	4½, 6, 9 & 12	⅝
6″	4½, 6, 9 & 12	⅝
7″	4½, 6, 9 & 12	11/16
8″	4½, 6, 9 & 12	¾
9″	4½, 6, 9 & 12	13/16
10″	4½, 6, 9 & 12	⅞
12″	4½, 6, 9 & 12	1

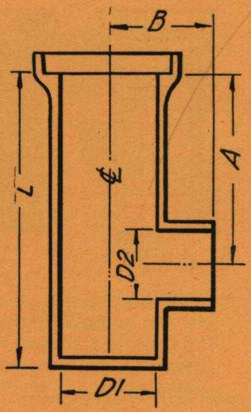
Unglazed Vitrified Clay

STOVE PIPE FITTINGS
SINGLE OPENINGS



Single Opening





Closed End Opening

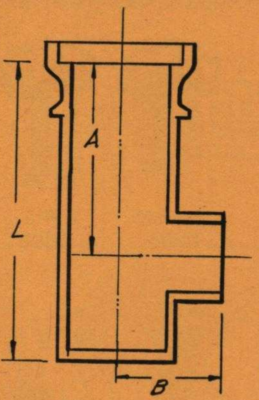
Note—All dimensions, except length, are the same for stove pipe as for double strength sewer pipe of the same inside diameter.

DIMENSION SCHEDULE

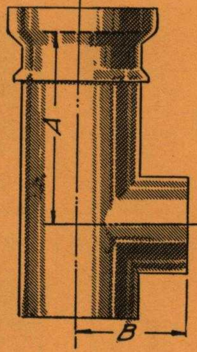
				Single Opening		Closed End Opening	
Inside Diameter of Barrel (inches)	Inside Diameter of Branch (inches)	Laying Length (feet)	Projection of Branch (inches)	Projection of Branch (inches)	Approximate Minimum Shipping Wt. (per piece)	Projection of Branch (inches)	Approximate Minimum Shipping Wt. (per piece)
D_1	D_2	L	B	A	(lbs.)	A	(lbs.)
6″	6″	2	6⅛	8	34	16	37
7″	7″	2	6¾	8	40	16	44
8″	6″	2	7¼	8	50	16	55
8″	8″	2	7¼	8	52	16	57

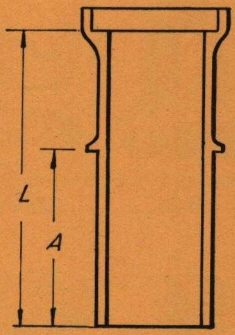
Unglazed Vitrified Clay

STOVE PIPE FITTINGS
DROP BOTTOMS



Closed Bottom





Open Bottom

Note—All dimensions, except length, are the same for stove pipe as for double strength sewer pipe of the same diameter.

DIMENSION SCHEDULE

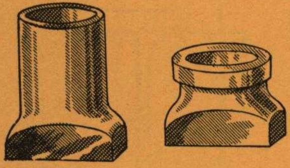
Inside Diameter of Barrel (inches)	Inside Diameter of Branch (inches)	Laying Length (feet)	Projection of Branch (inches)	Projection of Branch (inches)	Approximate Minimum Shipping Wt. (per piece)
D_1	D_2	L	A	B	(lbs.)
6″	6″	2	16	6⅛	41
7″	7″	2	16	6¾	53
8″	6″	2	16	7¼	62
8″	8″	2	16	7¼	66

Inside Diameter of Barrel (inches)	Laying Length (feet)	Collar to End (inches)	Approximate Minimum Shipping Wt. (per piece)
D	L	A	(lbs.)
6″	2	14	31
7″	2	14	40
8″	2	14	48

VITRIFIED CLAY CHIMNEY TOPS AND BASES

Glazed and Unglazed

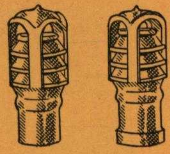
CHIMNEY BASES



Without Socket (Male)

With Socket (Female)

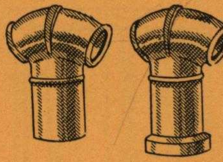
MANDARY TOP



Without Socket

With Socket

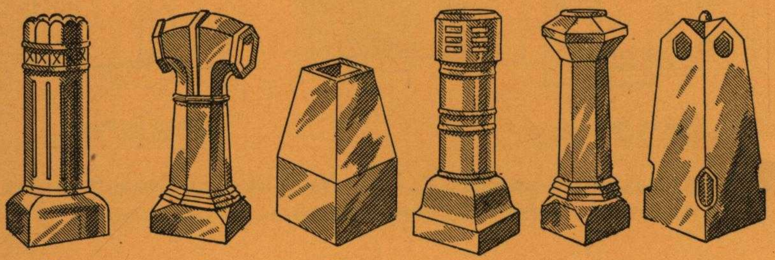
ANCHOR BONNET



Without Socket

With Socket

CHIMNEY TOPS



A

B

C

D

E

F
Chimney
Doctor

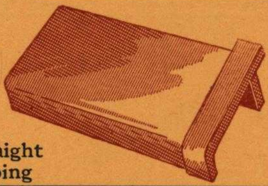
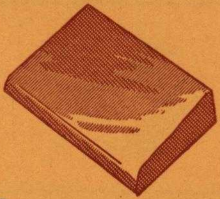
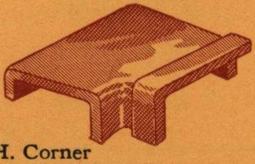
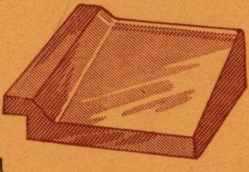
DIMENSION SCHEDULE

CHIMNEY TOPS				Mandary Top		Anchor Bonnet	CHIMNEY BASES			
Style	Height (feet)	Approx. Minimum Shipping Weight	Base Outside (inches)	Diameter of Flue (inches)	Approx. Minimum Shipping Weight (per piece)	Approx. Minimum Shipping Weight (per piece)	For Flue (inches)	Base (inches)	Height (inches)	Approx. Minimum Shipping Weight (per piece)
	H	(lbs.)		D	(lbs.)	(lbs.)	D		H	(lbs.)
A	3	90	13x13	6″	31	30	6″	12x12	14½	36
B	3	85	13x13							
C	2	55	13x13	7″	45	50	7″	12x12	14½	40
D	3	81	13x13							
E	3	80	13x13	8″	55	55	8″	12x12	15	45
F	3	125	13x13							

Salt Glazed Vitrified Clay

SINGLE SLANT WALL COPING

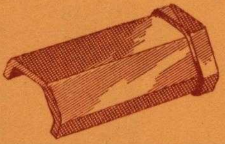
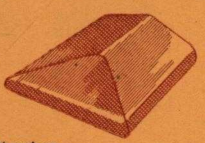
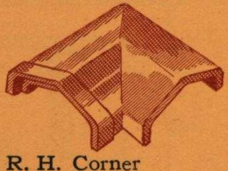
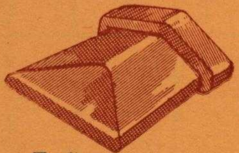
DIMENSION SCHEDULE

FOR CONSTRUCTION DETAILS SEE MANUFACTURERS' CATALOGUE	Width (inches) W	Outside Corner to End (inches)	Outside Corner to Socket Base (inches)	Approximate Minimum Shipping Wt. (per piece) (lbs.)
 Straight Coping	9″	x	24	20
	13″	x	24	30
	18″	x	24	45
 Starter	9″	12	x	8
	13″	12	x	13
	18″	12	x	27
 R. H. Corner	9″	17½	16¼	15
	13″	18⅛	17⅜	20
	18″	23	22¼	45
 End	9″	x	12	12
	13″	x	12	18
	18″	x	12	33

Salt Glazed Vitrified Clay

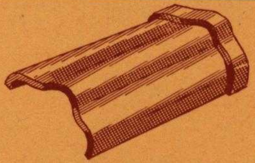
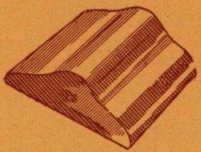
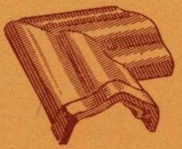
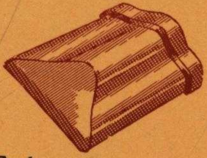
DOUBLE SLANT WALL COPING

DIMENSION SCHEDULE

FOR CONSTRUCTION DETAILS SEE MANUFACTURERS' CATALOGUE	Width (inches) W	Outside Corner to End (inches)	Outside Corner to Socket Base (inches)	Approximate Minimum Shipping Wt. (per piece) (lbs.)
 Straight Coping	9″	x	24	20
	13″	x	24	30
	18″	x	24	45
 Starter	9″	12	x	10
	13″	12	x	15
	18″	18	x	33
 R. H. Corner	9″	17½	16¼	10
	13″	18⅛	17⅜	18
	18″	23	22¼	40
 End	9″	x	12	12
	13″	x	12	18
	18″	x	18	35

Salt Glazed Vitrified Clay
CAMEL BACK WALL COPING

DIMENSION SCHEDULE

FOR CONSTRUCTION DETAILS SEE MANUFACTURERS' CATALOGUE	Width (inches) W	Outside Corner to End (inches)	Outside Corner to Socket Base (inches)	Approximate Minimum Shipping Wt. (per piece) (lbs.)
 Straight Coping	9″	x	24	20
	13″	x	24	30
	18″	x	24	45
 Starter	9″	12	x	8
	13″	12	x	13
	18″	18	x	33
 R. H. Corner	9″	17½	16¼	10
	13″	18⅛	17⅜	18
	18″	23	22¼	40
 End	9″	x	12	12
	13″	x	12	18
	18″	x	18	35

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"Clay Sewer Pipe is Guaranteed"